

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (cancelled).

Claim 2 (previously presented): The device of any one of claims 19 and 20, wherein the flood space includes a clearance area between the liner and torque tube.

Claim 3 (previously presented): The device of any one of claims 19 and 20, wherein the torque tube is a coiled drive shaft and the flood space includes gaps between the coils.

Claim 4 (previously presented): The device of any one of claims 19 and 20, wherein the torque tube includes a lumen for a guide wire and the flood space includes the lumen.

Claim 5 (previously presented): The device of claim 19 or 20, further comprising a suction port for aspirating fluid from the aspiration lumen and wherein the pressure in the flood space is lower than the pressure outside or proximal to the flood space during operation of the device.

Claims 6-9 (cancelled).

Claim 10 (previously presented): The device of claim 20, wherein the sealing assembly comprises an overflow port for exit of excess liquid and wherein the torque tube extends through the overflow port.

Claims 11-16 (cancelled).

Claim 17 (previously presented): The device of any one of claims 19 and 20, wherein proximal portions of the rotatable torque tube and liner are positioned in a hand held unit.

whereby, during operation of the medical device, liquid enters the flood space formed by the liner at the sealing site and creates a liquid seal around the torque tube to prevent ingress of air, the liquid exiting the flood space at the intersect area, where it directly enters the aspiration lumen.

Claim 21 (previously presented): The device of claim 19 or 20, wherein pressure within the flood space decreases along the length of the liner in a distal direction during operation of the device.

Claim 22 (previously presented): The device of any one of claims 19 and 20, wherein the inner diameter of the liner is from about 0.030 to about 0.040 inch.

Claim 23 (previously presented): The device of any one of claims 19 and 20, wherein the length of the liner is more than about 6 inches.

Claim 24 (previously presented): The device of any one of claims 19 and 20, wherein the liner comprises a thin, tough, flexible polymer-based tubing material.

Claim 25 (previously presented): The device of claim 24, wherein the liner comprises polyimide tubing and has a lubricious coating.

Claim 26 (previously presented): The device of any one of claims 19 and 20, wherein proximal portions of the torque tube and liner are positioned in a housing in a manner that permits free rotation and axial translation of the torque tube.

Claim 27 (previously presented): The device of any one of claims 19 and 20, wherein the length and diameter of the liner forming the flood space are selected to reduce the rate of flow in the proximal to distal direction in the flood space and reduce the requirement for precise diametrical tolerances during operation of the device.

Claim 18 (cancelled).

Claim 19 (previously presented): An aspirating catheter device having a liquid seal assembly that uses liquid as a sealing medium to prevent air or other fluids from contacting moveable catheter components in the area of a proximal end of a torque tube, the aspirating catheter device comprising: a torque tube operably connected to a drive system for rotation; a liner surrounding the torque tube as it enters an area of high vacuum in the area of the drive system to form a liquid flood space between the liner and the torque tube, the liner extending longitudinally less than the axial length of the torque tube and terminating distally at an intersect area; an infusion port supplying liquid to the liquid seal assembly at an area of substantially atmospheric pressure; and a catheter having a proximal end terminating in the sealing assembly at an aspiration site and extending distally to enclose the torque tube and the liner, wherein the catheter extends distally beyond the intersect area with respect to an operator of the device and forms an aspiration lumen between the catheter and the liner; whereby liquid drawn into the flood space during operation of the catheter system exits the flood space at the intersect area and enters the aspiration lumen directly at the intersect area.

Claim 20 (previously presented): A medical device comprising:

- (a) a rotatable torque tube operably connected to a drive system for rotation;
- (b) a sealing assembly comprising:
 - (i) a housing enclosing at least a proximal portion of the torque tube and a sealing site;
 - (ii) a liner surrounding the torque tube and forming a flood space extending longitudinally from a the sealing site along at least a portion of the torque tube to a distal terminal end of the liner at an intersect area; and
 - (ii) an infusion port providing application of liquid to the flood space at the sealing site during operation of the device; and
- (c) a catheter terminating in the sealing assembly at an aspiration site and extending distally beyond the intersect area to enclose the liner and forming an aspiration lumen between the catheter and the liner,